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| EXAMINER |
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LIN, JAMES

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| ART UNIT | PAPER NUMBER |
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1762

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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|------------------------------|-------------------------------|-------------------------------|--|
| Office Action Summary | Application No. 10/617,233 | Applicant(s) HIRANO ET AL. | |
| | Examiner Jimmy Lin | Art Unit 1762 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 21-27 in the reply filed on 7/13/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Interpretation

2. Given the broadest reasonable interpretation of "outside said display area" (claim 21), anywhere not directly inside the display area can be considered to be outside.
3. Given the broadest reasonable interpretation of "display area", individual pixels can be considered a display area since pixels display different colors.
4. The broadest reasonable interpretation of "a space that is directly below an area where said display area is displaced" (claim 28) is interpreted to be the space *immediately* below the display area. The claim does not put a limitation on the size of the space. Any space not *immediately* below the display area will be interpreted to be outside said space.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
6. Claims 24 and 26-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not provide proper or sufficient support for describing the size of the display areas in inches (claims 24 and 26-27). In fact, the specification makes no mention of any sort of units when referring to the size of the display area. In addition, there is no support for

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any sort of units when referring to the size of the display area. In addition, there is no support for measuring the size diagonally.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 21-23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144).

Miura discloses a method of making a plasma display panel [0001], the method comprising:

feeding a substrate in a first direction in a vacuum atmosphere (Fig. 1; [0015]);

heating and evaporating a plurality of evaporation sources 14a,b [0046] at least one of which is located outside the display area in a second direction perpendicular to said first direction, said evaporation sources being positioned facing the display area of a substrate 12 (Fig. 1).

The evaporation sources are located in a second direction parallel to the display area, relative to one of the edges of the display area.

Miura teaches a method of making a PDP by evaporation, but does not explicitly teach a step of forming a protection film on the substrate of the PDP. However, Nishiki teaches a method of making a PDP (abstract), wherein a protection film can be formed by evaporation (col. 10, lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed a protection film on the substrate of Miura because Nishiki teaches that a protective film increases the lifetime of the PDP.

Claim 22: Nishiki teaches that the protection film is formed by evaporation (col. 10, lines 1-3).

Claim 23: The first and second line can be the same line (i.e., the line perpendicular to the plane of the substrate), thereby having an angle of zero.

Claim 28: Miura teaches that the plurality of evaporation sources are located outside the space immediately below the display area.

9. Claims 21-23, 25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komada (2001/0038894) in view of Fumihiro (JP 11-335820).

Komada teaches a method of making a plasma display panel [0187]-[0190], including the step of forming a gas barrier film (i.e., a protection film) (abstract), the method comprising:

feeding a substrate 50 in a first direction in a vacuum chamber 302;

heating and evaporating an evaporation source located outside the display area in a second direction perpendicular to the first direction, said evaporation source being positioned facing the display area of the substrate ([0222]-[0223]; Fig. 13).

The evaporation source is located in a second direction parallel to the display area, relative to one of the ends of the display area.

Komada does not explicitly teach a plurality of evaporation sources. However, Fumihiro teaches that a plurality of vapor sources can be used in the vapor deposition of a PDP (abstract; Fig. 3). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a plurality of evaporation sources in the method of Komada because Fumihiro teaches that multiple evaporation sources are suitable for depositing films for a PDP.

Claim 22: Komada teaches that the gas barrier film (i.e., a protection film) is formed by vacuum evaporation [0222]-[0223].

Claim 23: The first and second line can be the same line (i.e., the line perpendicular to the substrate), thereby having an angle of zero.

Claim 25: Komada teaches using a web substrate ([0222], Fig. 13), but does not explicitly teach that the substrate has at least three display areas. However, the continuous web used in the process of Komada would not be the final product. The continuous web would be too

large to have practical use as a PDP. One skilled in the art would obviously cut the web into a predetermined size. In addition, Komada intends to use a continuous web so that the benefits of web processing may be used. One of the benefits of web is the ability to manufacture multiple products onto a single substrate, thereby increasing the efficiency and throughput. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to formed at least three display areas on the continuous web. One would have been motivated to do so in order to cut the web into a useable and practical size.

10. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144), as applied to claim 21, and further in view of the admitted prior art.

Claim 24: Miura and Nishiki are discussed above, but does not explicitly teach that the substrate has at least two display areas each having a size of 50-size or greater. However, the Applicant teaches that it is known in the art to deposit onto such a substrate (pg. 4, line 28 – pg. 5, line 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have deposited onto a substrate having two display areas each having a size of 50-size or greater in the method of Miura and Nishiki. One would have been motivated to do so in order to increase the production and efficiency of the process.

Claim 25-26: Miura and Nishiki are discussed above, but does not explicitly teach that the substrate has at least three display areas or that the display area can be a size of 55-size or greater. However, the Applicant teaches that it is known in the art to deposit onto such a substrate, wherein the substrate has a display area having such a size (pg. 4, line 26 – pg. 5, line 4). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used substrates having three display areas and display areas of 55-size because the Applicant teaches that such substrates and display areas are suitable in the method of making a PDP.

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11. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144), as applied to claim 21, and further in view of Konishi et al. (5,957,743).

Miura and Nishiki are discussed above, but does not explicitly teach that the display area can be a size of 60-size or greater. However, Konishi teaches that plasma displays can have up to a size of 60 inches (col. 1, lines 57-62). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have made a display area of 60 inches with a reasonable expectation of success because Konishi teaches that such plasma display sizes are capable of being produced and that such sizes are suitable for plasma displays.

12. Claims 24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komada (2001/0038894) in view of Fumihiro (JP 11-335820), as applied to claim 21 above, and further in view of Konishi et al. (5,957,743) for substantially the same reasons as applied to claims 26-27 above.

13. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (2003/0087129) in view of Nishiki et al. (6,261,144), as applied to claim 21, and further in view of Choi et al. (2002/0063525).

Miura and Nishiki are discussed above, but does not explicitly teach that the substrate can have at least three display areas. However, Choi teaches a method of making a PDP [0002], wherein the substrate has at least three pixels (i.e., display areas) (Figs. 6, 9, and 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed at least three pixels on the substrate. One would have been motivated to do so in order to form a PDP of a desirable size.

Miura, Nishiki, and Choi do not explicitly teach that the pixels must be at least 60-size or greater. However, the pixels must be larger than 60 nm in size because the pixels must be larger than a few particles of compounds. Therefore, it would have been obvious to one of ordinary

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skill in the art at the time of invention to have formed pixels having a size of at least 60 nm because the pixels are made up of a plurality of particles that, when bonded together, must be longer than 60 nm.

14. Claims 24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komada (2001/0038894) in view of Fumihiro (JP 11-335820), as applied to claim 21 above, and further in view of Choi et al. (2002/0063525) for substantially the same reasons as applied to claims 24-27 above.

Response to Arguments

15. Applicant's arguments filed 11/15/2006 have been fully considered but they are not persuasive.

The Applicants argue that Miura and Nishiki do not explicitly teach at least one evaporation source located outside the display area in a second direction parallel to the display area and perpendicular to the first direction. However, this argument is incorrect because Miura and Nishiki does teach such limitations, as discussed above.

The Applicants argue that Komada does not teach forming a film on a plasma display screen. However, Komada does recognize that the film forming method described therein can be used to make a plasma display panel [0187]-[0190].

The Applicants argue that Komada and Fumihiro do not explicitly teach at least one evaporation source located outside the display area in a second direction parallel to the display area and perpendicular to the first direction. However, this argument is incorrect because Miura and Nishiki does teach such limitations, as discussed above.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoki et al. (5,770,921) teaches the vapor deposition of MgO.

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17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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